

| <b>DOING SCIENCE: THE PROCESS OF SCIENTIFIC INQUIRY</b>                    |                 |  |
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| <b>Michigan Grade Level Content Expectations: Middle School Science</b>    |                 |  |
| <b>Lesson</b>  | <b>Standard</b> | <b>GLCE</b>  |
| All lessons  | (C) I.1.1       | Generate scientific questions about the world based on observation.  |
| 1, 2, 3  | (C) I.1.2       | Design and conduct scientific investigations.  |
| 1, 3, 4  | (C) I.1.3       | Use tools and equipment appropriate to scientific investigations.  |
| 1  | (C) I.1.4       | Use metric measurement devices to provide consistency in an investigation.   |
| All lessons  | (C) I.1.5       | Use sources of information in support of scientific investigations.  |
| All lessons  | (C) I.1.6       | Write and follow procedures in the form of step-by-step instructions, formulas, flow diagrams, and sketches.   |
| All lessons  | (R) II.1.1      | Evaluate the strengths and weaknesses of claims, arguments, or data.   |
| 1, 2, 3  | (R) II.1.2      | Describe limitations in personal knowledge.  |
| 2, 3, 4  | (R) II.1.3      | Show how common themes of science, mathematics, and technology apply in real-world contexts.   |
| 1, 4   | (LH) III.3.2    | Describe how heredity and environment may influence/determine characteristics of an organism.  |
| <b>Michigan Grade Level Content Expectations: Mathematics Grades 6 – 8</b> |                 |  |
| <b>Grade 6</b>   |                 |  |
| <b>Lesson</b>  | <b>Standard</b> | <b>GLCE</b>  |
| 3, 4   | N.FL.06.10      | Add, subtract, multiply and divide positive rational numbers fluently.   |
| 3  | N.FL.06.12      | Calculate part of a number given the percentage and the number.  |
| 3, 4   | N.FL.06.15      | Solve applied problems that use the four operations with appropriate decimal numbers.  |
| 2, 3, 4  | A.PA.06.08      | Understand that relationships between quantities can be suggested by graphs and tables.  |
| <b>Grade 7</b>   |                 |  |
| 3, 4   | N.FL.07.07      | Solve problems involving operations with integers.   |
| 3, 4   | N.FL.07.09      | Estimate results of computations with rational numbers.  |
| 3, 4   | A.PA.07.01      | Recognize when information given in a table, graph, or formula suggest a proportional or linear relationship.  |
| 3, 4   | D.RE.07.01      | Represent and interpret data using circle graphs, stem and leaf plots, histograms, and box-and-whisker plots, and select appropriate representation to address specific questions. |
| <b>Grade 8</b>   |                 |  |
| 3, 4   | D.AN.08.02      | Recognize practices of collecting and displaying data that may bias the presentation or analysis.  |
| 2, 3, 4  | D.PR.08.06      | Understand the difference between independent and dependent events, and recognize common misconceptions  |

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|  |  | involving probability, e.g., Alice rolls a 6 on a die three times in a row; she is just as likely to roll a 6 on the fourth roll as she was on any previous roll.   |
| <b>Michigan Grade Level Content Expectations: English Language Arts Grades 6 – 8</b> |  |   |
| <b>Lesson</b>  | <b>Standard</b>                        | <b>GLCE</b>   |
| <b>All lessons</b>   | R.WS.06.01<br>R.WS.07.01<br>R.WS.08.01 | Explain and use word structure, sentence structure, and prediction to aid in decoding and understanding the meanings of words encountered in context.   |
| <b>All lessons</b>   | R.WS.06.05<br>R.WS.07.05<br>R.WS.08.05 | Acquire and apply strategies to identify unknown words and construct meaning.   |
| <b>All lessons</b>   | R.WS.06.07<br>R.WS.07.07<br>R.WS.08.07 | In context, determine the meaning of words and phrases including: regional idioms, literary and technical terms, and content vocabulary using strategies including connotation, denotation, and authentic content-related resources (6 cross-cultural expressions, mathematical expressions, scientific procedures, and literary terms using strategies and authentic content-related resources (7); content area vocabulary and literary terms using strategies including activating prior knowledge, using text features/structures, and authentic content-related resources. (8) |
| <b>3, 4</b>  | R.IT.06.01<br>R.IT.07.01<br>R.IT.08.01 | Analyze the structure, elements, features, style, and purpose of informational genre, including: research reports, “how-to” articles, and essays (6); persuasive essay, research report, brochure, personal correspondence, autobiography and biography (7); comparative essays, newspaper writings, technical writings, and persuasive essays. (8)   |
| <b>All lessons</b>   | R.CM.06.01<br>R.CM.07.01<br>R.CM.08.01 | Connect personal knowledge, experiences, and understanding of the world to themes and perspectives in text through oral and written responses.  |
| <b>3, 4</b>  | R.CM.06.02<br>R.CM.07.02<br>R.CM.08.02 | Retell through concise summarization grade-level narrative and informational text.  |
| <b>All lessons</b>   | R.CM.06.03<br>R.CM.07.03<br>R.CM.08.03 | Analyze global themes, universal truths and principles within and across texts to create a deeper understanding by drawing conclusions, making inferences, and synthesizing.  |
| <b>All lessons</b>   | R.CM.06.04<br>R.CM.07.04<br>R.CM.08.04 | Apply significant knowledge from grade-level science, social studies, and mathematics texts.  |
| <b>All lessons</b>   | R.MT.06.01<br>R.MT.07.01<br>R.MT.08.01 | Self-monitor comprehension when reading or listening to text by automatically applying and discussing the strategies used by mature readers to increase comprehension including: predicting, constructing mental images, visually representing ideas in text, questioning, rereading or listening again if uncertain about meaning, inferring, summarizing, and engaging in interpretive discussions.   |

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| 2, 3, 4     | W.GN.06.03<br>W.GN.07.03<br>W.GN.08.03 | Formulate research questions using multiple resources and perspectives that allow them to organize, analyze, and explore problems and pose solutions that culminate in a final presented project using the writing process. (6) Formulate research questions using multiple resources, perspective, and arguments/counter-arguments to develop a thesis statement that culminates in a final presented project using the writing process. (7) Formulate research questions that demonstrate critical evaluation of multiple resources, perspectives and arguments/counter-arguments that culminate in a presented final project using the writing process. (8) |
| All lessons | W.PR.06.01<br>W.PR.07.01<br>W.PR.08.01 | Set a purpose, consider audience, and replicate authors' styles and patterns when writing a narrative or informational piece.  |
| 3, 4        | W.PR.06.04                             | Draft focused ideas for a specific purpose using multiple paragraphs, sentence variety, and voice to meet the needs of an audience (e.g., word choice, level of formality, and use of example) when writing compositions.  |
| All lessons | W.PS.06.01<br>W.PS.07.01<br>W.PS.08.01 | Exhibit personal style and voice to enhance the written message in both narrative (e.g., personification, humor, element of surprise) and informational writing (e.g., emotional appeal, strong opinion, credible support).  |
| All lessons | W.GR.06.01<br>W.GR.07.01<br>W.GR.08.01 | In the context of writing, correctly use style conventions (e.g., Modern Language Association Handbook) and a variety of grammatical structures in writing.  |
| All lessons | W.SP.06.01<br>W.SP.08.01               | In the context of writing: correctly spell frequently encountered and frequently misspelled words (6); use correct spelling conventions. (8)   |
| All lessons | W.HW.06.01<br>W.HW.07.01<br>W.HW.08.01 | Write neat and legible compositions.   |
| 3, 4        | S.CN.06.01<br>S.CN.07.01<br>S.CN.08.01 | Adjust their use of language to communicate effectively with a variety of audiences and for different purposes by asking and responding to questions and remarks to engage the audience when presenting (6); by using specialized language related to a topic and selecting words carefully to achieve precise meaning when presenting (7); by using enunciation to emphasize key ideas and concepts when presenting. (8)  |
| 3, 4        | L.CN.06.01<br>L.CN.08.01               | Respond to, evaluate, and analyze the speaker's effectiveness and content when listening to or viewing a variety of speeches and presentations. (6) Analyze the main idea, significant details, fact and opinion, bias, propaganda, argumentation, or support when listening to or viewing a variety of speeches and presentations. (8)  |
| 3, 4        | L.CN.06.02<br>L.CN.07.02<br>L.CN.08.02 | Listen to or view critically while demonstrating appropriate social skills of audience behaviors (e.g., eye contact, attentive, supportive); critically examine the verbal and non-verbal strategies during speeches and presentations.  |
| All lessons | L.RP.06.01                             | Listen to or view knowledgeably a variety of genre to summarize, take note on key points, and ask clarifying questions.  |
| All lessons | L.RP.06.05<br>L.PR.07.05<br>L.PR.08.05 | Respond to multiple text types when listened to or viewed knowledgeably, by discussing, illustrating, and/or writing in order to compare/contrast similarities and differences in idea, form, and style to evaluate quality and to identify personal and universal themes (6); and offer opinions or solutions. (7 & 8)  |

| <b>Michigan Grade Level Content Expectations: Health Education – Grades 6 — 8</b> |                 |  |
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| <b>Grade 6</b>  |                 |  |
| <b>Lesson</b>   | <b>Standard</b> | <b>GLCE</b>  |
| 3, 4  | 4.6             | Describe the decision making and problem solving steps.  |
| 3, 4  | 4.7             | Demonstrate the ability to make a decision or solve a problem using criteria to evaluate solutions.  |
| All lessons   | 4.10            | Demonstrate effective listening strategies.  |
| All lessons   | 4.11            | Demonstrate the ability to use assertive communication skills appropriately.   |
| <b>Grades 7 &amp; 8</b>   |                 |  |
| <b>Lesson</b>   | <b>Standard</b> | <b>GLCE</b>  |
| 3, 4  | 4.9             | Demonstrate using the problem solving steps to solve a problem.  |
| 3, 4  | 5.3             | Locate resources in one’s school and community, and on the Internet, related to personal health issues and concerns; and assess the validity of the resources. |